

**REMARKS**

Claims 4-11 have been objected to under 37 C.F.R. 1.75(c) as improper multiple dependent claims. Accordingly, the present response amends claims 4-11 to overcome this objection. The amendments also include changes to the claims to avoid any potential rejection of indefiniteness based on 35 U.S.C. 112, second paragraph.

Claims 1-3 have been rejected under 35 U.S.C. 112, second paragraph, as being indefinite. Specific objections to claims 1-3 have been addressed in amendments made to the claims. It is believed that claims 1-3 now are in a form which is proper and which overcomes the indefiniteness rejection.

Claims 1-3 also have been rejected under 35 U.S.C. 102(b) as being anticipated by the German reference DE 2 322 889 cited in the International Search Report of record and in applicant's Information Disclosure Statement submitted with the original application.

Reconsideration and withdrawal of the §102(b) rejection are requested based on the following comments concerning the deficiencies of the reference.

Applicant respectfully submits that the German reference has no materiality with respect to the process now claimed. DE 2 322 889 is concerned with a cement having good sulphate resisting properties produced by mixing Portland cement and another cement that is obtained by burning marl having a low lime content. In contrast thereto, the present invention relates to a process for producing marl slags and marl slag cements characterized in that in a first process step argillaceous marl or a mixture of marl and clay, having a basicity of  $< 2.0$  is dried, preheated and calcined and thereafter, in a second

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process step, the product obtained from the first step is melted in a separate melting furnace at a higher temperature than applied in the first step and granulated from the melt. DE 2 322 889 does not disclose or suggest these process steps, either singly or in combination. Consequently, the reference neither anticipates nor renders obvious applicant's claimed process.

If the Examiner persists in rejecting applicant's claims based on the German reference, it is requested that a specific comparison be made between what applicant claims and how the reference discloses or suggests the claimed process steps.

In light of the foregoing amendments and remarks, it is urged that the application now is in consideration for allowance. Accordingly, such action is solicited.

Respectfully submitted,



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**APPENDIX**  
**VERSION WITH MARKINGS TO SHOW CHANGES MADE**

1. (Amended) A process for producing marl slags and marl slag cements, or mixed components for mixed cements, from marl having a basicity  $\text{CaO/SiO}_2$  of  $< 2.0$ ,

[characterized in that] wherein:

in a first process step argillaceous marl, or a mixture of marl and clay, having a basicity of  $< 2.0$  is dried, preheated and calcined [and that, after this, the obtained product]; and

thereafter, in a second process step, the product obtained in the first process step is melted in a separate melting furnace at a higher [temperatures] temperature than applied in the first process step and is granulated from the melt.

2. (Amended) A process according to claim 1, [characterized in that] wherein the first process step is realized in a [suspension type] heat exchanger of the suspension type, a rotary tubular kiln, a multiple-hearth furnace [or], a shaft furnace, or [in] a [fluidized bed or cyclone] preheating unit of the fluidized bed or cyclone type.

3. (Amended) A process according to claim 1 or 2, [characterized in that] wherein the second process step is carried out in a melting cyclone, a rotary tubular kiln [or], a [hearth-type furnace] furnace of the hearth type, or in an iron melting oxidation reactor.

4. (Amended) A process according to claim 1, [2 or 3, characterized in that the] wherein a target slag is adjusted to a basicity  $\text{CaO/SiO}_2$  of between 0.9 and 1.85 by mixing marl and clay.

5. (Amended) A process according to [any one of claims 1 to 4, characterized in that] claim 1, wherein the melt at basicities of  $> 1.4$  is sprayed into [a granulator and, in particular,] a vapor granulator.

6. (Amended) A process according to [any one of claims 1 to 5, characterized in that] claim 1, wherein the first step is carried out at temperatures [of up to  $950^{\circ}$  to] not exceeding  $1000^{\circ}$ , drying being effected at temperatures [of] in a range from  $100$  to  $210^{\circ}$ , preheating being effected [at] in a range from  $210^{\circ}$  to  $600^{\circ}\text{C}$  and calcining being effected [at] in a range from  $600^{\circ}$  to  $1000^{\circ}\text{C}$ .

7. (Amended) A process according to [any one of claims 1 to 6, characterized in that] claim 1 or 6, wherein the second process step is carried out at temperatures [of] between  $1450^{\circ}$  and  $1550^{\circ}\text{C}$ .

8. (Amended) A process according to [any one of claims 1 to 7, characterized in that] claim 1, wherein the first process step is realized with finely broken marl having a mean particle size ranging from  $20\text{mm}$  to  $30\text{mm}$ .

9. (Amended) A process according to [any one of claims 1 to 8, characterized in that] claim 1, wherein by-pass dust from the production of clinker is [added to] included in the [charging] material processed in the first process step.

10. (Amended) A process according to [any one of claims 1 to 9, characterized in that the] claim 1, wherein any MgO portion of the [charging] material processed in the first process step is adjusted to below  $19\text{ wt.}\%$ .

11. (Amended) A process according to [any one of claims 1 to 10, characterized in that] claim 1, wherein granulation in the second process step is effected by spray

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granulation [is effected] using hydrocarbons as a coolant and [that the] synthetic gas formed during granulation is burned in the first process step.